

**CURRICULUM VITAE**

**Kath Bogie, D.Phil**

**EDUCATION**

- 1984 B.Sc. Metals and Materials Technology (Honours), University of Manchester Institute of Science and Technology, Manchester, U.K.
- 1998 D.Phil Biomedical Engineering, University of Oxford, Oxford, U.K.

**PROFESSIONAL APPOINTMENTS**

- 1984-1985 Research Assistant, North Staffordshire Bio-Medical Engineering Unit, Stoke-on-Trent, UK
- 1989-1992 Research Bioengineer, National Spinal Injuries Center, Stoke Mandeville Hospital, Aylesbury, UK
- 1989-1994 Associate Clinical Scientist, Queen Mary and Westfield College, University of London, London, UK
- 1992-1994 Consultant Bioengineer, Tissue Viability Clinic, National Spinal Injuries Center, Stoke Mandeville Hospital, Aylesbury, UK
- 1997-2001 Research Associate, Department of Orthopaedics, Case Western Reserve University, Cleveland, Ohio
- 2001-2009 Senior Research Associate, Department of Orthopaedics, Case Western Reserve University, Cleveland, Ohio
- 2004-present Senior Research Scientist, Cleveland Veterans Affairs Medical Center, Cleveland, Ohio
- 2009-present Adjunct Assistant Professor (Primary), Dept of Orthopaedics, Case Western Reserve University, Cleveland, Ohio
- 2009-present Adjunct Assistant Professor (Secondary), Dept of Biomedical Engineering, Case Western Reserve University, Cleveland, Ohio
- 2010-2012 Research co-Director, Advanced SCIM Fellowship Program, Cleveland Dept of Veterans Affairs Medical Center
- 2010 Site Director, DETECT (Diagnostic Engineering Technologies for Evaluating Connective Tissues), Wright Center for Sensor Systems Engineering, Ohio Third Frontier Wright Projects Program

**OTHER PROFESSIONAL EXPERIENCE**

- 1988 Design Consultant, Sunrise Medical Ltd., UK
- 2002-2005 Consultant, Cleveland Medical Devices, Cleveland, Ohio
- 2007, 2012 Consultant, Hill-Rom Medical, Batesville, IN
- 2007-2008 Consultant, Guidepoint Global (Clinical Advisors) LLC
- 2009 Consultant, Neocure Group LLC
- 2009 Consultant, Avery Medical

## **MEMBERSHIP OF SCIENTIFIC SOCIETIES**

Rehabilitation Engineering Society of North America  
European Society of Biomechanics  
Wound Healing Society  
International Society of Biomechanics

## **HONORS AND AWARDS**

1984 Course prize for best in year, University of Manchester Institute of Science and Technology, Manchester, UK  
1988 Award from the Amphlett Fund of Worcester College, Oxford  
1998 Featured on front cover of PVA/SCRF annual report.  
2003 Featured in Shaker Life Community Magazine article *Engineering Women*  
2004 Featured in PVA/SCRF annual report  
2006 Who's Who in Medicine and Healthcare, 2006-2007  
2007 Featured in Case Western Reserve University 2006-7 Edition of The Value of Research  
2007 Invited attendee, National Academies Keck Futures Initiative The Future of Human Healthspan  
2009 Featured in lead article of US Medicine *Pressure and Time: The Two Combined Can Equal Pressure Ulcers*  
2010 Who's Who in America, 2010-2011

## **PROFESSIONAL SERVICE**

### **Veterans Administration**

June, 2003 Rehabilitation Research and Development Service Merit Review Program grants  
March, 2006 Rehabilitation Research and Development Service Merit Review Program grants  
August, 2006 Rehabilitation Research and Development Service Merit Review Program grants  
March, 2007 Rehabilitation Research and Development Service Merit Review Program grants  
2007-present Member, LSDVAMC Institutional Review Board  
2008-present Member, LSCDVAMC Professional Standards Board for Biomedical Engineers  
2009 Scientific Review Coordinator, Advanced Platform Technology Center, LSCDVAMC  
June, 2010 Ad hoc reviewer, Surgery panel, Joint BLR&D and CSR&D Services Merit Review Board  
2011-present Leadership Committee, Advanced Platform Technology Center, VA Center for Research Excellence  
2011-present National Subject Matter Expert in Rehabilitation Research for the Research Dedicated Examining Unit (DEU), Healthcare Retention & Recruitment Office  
April, 2013 Ad hoc reviewer, Small Projects in Rehabilitation Research (SPiRE) Program  
Oct, 2013 Ad hoc reviewer, Small Projects in Rehabilitation Research (SPiRE) Program

### **National Institutes of Health**

Oct 2005 Ad-hoc reviewer, Musculoskeletal Rehabilitation Medicine (MRS)  
Jul 2008 Ad-hoc reviewer, ZRG1MOSSF15  
March 2010 Ad-hoc reviewer, ZRG1MOSSF15  
Oct 2011 Ad-hoc reviewer, ZRG1 SBIB-X (02) Special Emphasis Panel  
Oct 2012 Ad-hoc reviewer, ZRG1MOSSF15

### **Department of Defense**

2008 Review panel, Deployment Related Medical Research Program, ATTA-DEV-MR  
2009 Review panel, Deployment Related Medical Research Program, Restoration panel  
2009 Online review panel, CDMRP Spinal Cord Injury Research Program EHDA-ROM Panel  
2012 Reviewer, Spinal Cord Injury Research Program, CET-1 Panel

**National Science Foundation**

Jan 2003      Review Panel on Biomedical Engineering and Research to Aid Persons with Disabilities Program

**British Lung Foundation**

Sept 2005      Reviewer, Research Fellowship Program

**National Medical Research Council (Singapore)**

October 2006   Reviewer, Individual Research Grant Program

**National Council for Research and Development (Romania)**

2011-2012      Reviewer, Joint Applied Research Program

**Research Fund Secretariat (Hong Kong SAR)**

2013            Reviewer, Health and Medical Research Fund

**Lytmos Group LLC**

2008            Reviewer, Proposal Preparation Assistance Grant Program  
2008            Reviewer, KCALSI Collaborative Research Grant Program  
2008            Reviewer, Missouri Proposal Preparation Assistance Grant Program  
2009            Reviewer, Innovation Partnership Proposal Preparation Assistance Program  
2009            Reviewer, Shared Instrument Grants, Bankhead-Coley Cancer Research Program, Florida Department of Health  
2010            Reviewer, Technology Transfer/Commercialization Partnership Grants, James and Esther King Biomedical Research Program, Florida Department of Health  
2010            Reviewer, Innovation Partnership Proposal Preparation Assistance Program  
2011            Reviewer, Bankhead-Coley Cancer Research Program  
2012            Reviewer, James and Esther King Biomedical Research Program

**American Institute of Biological Sciences**

2008            Reviewer, Rehabilitation Research Grant Program

**International FES Society**

July 2001      Organizing Faculty, 6<sup>th</sup> Annual Conference of the International FES Society

**Internet Science and Technology Fair**

April 2003      Judge, Living Systems Projects  
April 2004      Judge, Living Systems Projects & Materials Projects  
April 2005      Judge, Living Systems Projects & Materials Projects  
April 2006      Judge, Living Systems Projects & Materials Projects  
April 2007      Judge, Living Systems/ Materials/Medical Devices & Equipment/Bacteria & Viral Detection  
April 2008      Judge, Medical Devices & Equipment/Recombinant DNA Techs  
April 2009      Judge, Medical Devices & Equipment/Recombinant DNA Techs/ Living Systems/ Biocompatible Materials/Environmental Quality  
May, 2011      Judge, Living Systems/ Materials/Medical Devices & Equipment  
May, 2012      Judge, Living Systems/ Materials/Medical Devices & Equipment

**National Spinal Cord Injury Association**

2008            Advisor, Neurotechnology for Spinal Cord Injury fact sheet  
*Pressure Sore Prevention and Wound Therapy*

**American Society of Neurorehabilitation**

August 2003   Faculty, Workshop on *Scientific Basis of Neuro-Rehabilitation for Spinal Cord Injury and*

## *Stroke*

### **Evidence-based Practice in Wound Care**

Sept 2006 Course Director & Scientific Chair, Organizing Committee, 1<sup>st</sup> International Conference  
June, 2009 Course Director & Scientific Chair, Organizing Committee, 2<sup>nd</sup> International Conference

### **Expert panel for development of PU implementation research agenda**

June, 2009 Convener and Chair, Expert panel for development of PU implementation research agenda, VA Health Services Research and Development Quality Enhancement Research Initiative

### **Wound Healing Society**

2011 – present Member, Education Committee

### **Paralyzed Veterans of America Research Foundation**

2011 Reviewer, PVA Research Fellowship Program

### **Brain Injury Association**

2011 Advisor, Neurotechnology for Brain Injury Fact Sheet  
*Pressure Sore Prevention and Wound Care*

### **Manuscript Reviews**

2003 Neuromodulation  
2003-present Archives of Physical Medicine and Rehabilitation.  
2004-present Journal of Rehabilitation Research and Development  
2009 Journal of Rehabilitation Research and Development Associate Editor, special topic  
2005-present Journal of Bone and Joint Surgery  
2006 Journal of Applied Physiology  
2007 IEEE Transactions on Neural and Rehabilitation Systems Engineering  
2007 Medical Science Monitor  
2008 Journal of Neuroscience Methods  
2009 Clinical Orthopaedics & Related Research  
2009 Wound Repair & Regeneration  
2011 Annals of Biomedical Engineering  
2011 JBJS Case Connector  
2012 BMC Complementary and Alternative Medicine  
2012 Editorial Board Member, Journal of Tissue Viability  
2012 Journal of Spinal Cord Medicine  
2013 Muscle and Nerve  
2013 Physiological Measurement  
2013 Journal of NeuroEngineering and Rehabilitation  
2013 Editorial Board member, JSM Biotechnology & Biomedical Engineering  
2013 JBJS Reviews

### **UNIVERSITY SERVICE**

2002-2006 Faculty member, Women in Science and Engineering Roundtable  
2003-2010 Coordinator, Functional Electrical Stimulation Center Seminar Series  
2003-2005 Coordinator, Neural Prosthesis Seminar Series  
2005-present Faculty member, Department of Orthopaedics, Research Committee  
2008 Reviewer, Skin Diseases Research Center Pilot & Feasibility program  
2009 Poster competition judge, showCASE 2009  
2010 Poster competition judge, showCASE 2010

2010-present Coordinator, Faculty Research Seminar program, Department of Orthopaedics  
 2011 Poster judge, Lepow Day (Medical student research)  
 2011 Reviewer, Clinical & Translational Science Collaborative, Core Utilization Pilot Grants  
 2011 Faculty member, Dept of Genetics Imaging Advisory Committee  
 2012 Poster judge, Lepow Day (Medical student research)  
 2013 Poster competition judge, showCASE 2013

## COMMUNITY SERVICE

2007 Judge, Science Fair, Shaker Heights Middle School, Shaker Hts, OH  
 2009 Learning for Life - Career Awareness Exploring program *Careers in Biomedical Engineering*, Health Careers Center, Cleveland, OH  
 2011 Young Women in Science, *Careers in Biomedical Engineering*, Shaker Heights Middle School, Shaker Hts, OH

## TEACHING ACTIVITIES

### Formal Teaching

Sept 2000 *Pressure sore prevention using NMES* Cleveland VA Medical Center In-service Training:  
 2002-2007 EBME314 lab *Non-invasive evaluation of the effects of seating*  
 2002- 2006 ASTRO188: *How to be a scientist*  
 April 2003 EBME507 *Pressure sore prevention by FES*  
 Oct 2003 Workshop on *Seating pressure mapping* SCI Medicine Training program, Cleveland VA Medical Center  
 March 2007 EBME507 *Electrical stimulation and the management of pressure ulcers*  
 Oct 2009 PGY-1 Interns Introduction to Orthopaedics *Introduction to Biomechanics*  
 May 2010 Facilitator, IBMS 500 *On Being A Professional, The Responsible Conduct of Research*  
 Feb 2011 BME Graduate Seminar *Addressing the problem of pressure ulcers: approaches to prevention*  
 2011- 2102 EBME380 Senior Design project: *A novel substrate for testing the Integrated Surface Stimulation Device*  
 Feb 2012 EBME 318/319 lab *Non-invasive evaluation of the effects of seating*  
 Mar 2013 EBME 318 lab *Non-invasive evaluation of the effects of seating*

### Research Training

February 2002-April 2003	Kimberley Morris	CWRU Undergraduate, BME
May 2003-August 2003	Geoffrey Seisel	CWRU Undergraduate, BME
February 2004-May 2006	Kimberley Morris	CWRU Masters student, BME
June 2004-December 2004	Alex Vikmanis	CWRU Undergraduate, BME
June 2005-August 2005	Shipra Gupta	CWRU Undergraduate, Chemistry
June 2005-August 2005	John Kelly	CWRU Undergraduate, BME
June 2005-August 2005	Michael Laughlin	Marquette Undergraduate, BME
June 2005- May 2013	Gary Wu	CWRU Doctoral student, BME
June 2005- May 2013	Daniel Howe	CWRU Doctoral student, EECS
August 2005 – Nov 2007	Adam Whitney	CWRU Masters student, BME
June 2006-August 2006	Jonathan Olbrych	Georgetown, Undergraduate, Health Sci/Pre-med
June 2006-August 2006	Nada Haq	CWRU Undergraduate, BME
June 2007- August 2007	Rami Mikati	CWRU Undergraduate, BME
Feb 2008 –August 2008	Jennifer Kim	NEOUCOM, Medical Student
May 2008 – August 2008	Ben Chlebina	CWRU Undergraduate, BME
May 2010 – July 2010	Kan Yu Au	CWRU, Medical Student
May 2010 – July 2010	Gabriel Gabarian	CWRU, Medical Student
May 2010 – July 2010	Laura Shaw	CWRU, Medical Student
May 2010 – July 2010	Michael Cover	CWRU, Medical Student
May 2010 – Sept 2010	Jennifer Nishimura	CWRU, Medical Student

May 2010 – July 2012	Arielle Schindler	Ohio College of Podiatric Medicine, Medical student
August 2010 – Oct 2010	Alex Davis III	CWRU, Medical Student
March 2011 – April 2011	Laura Sexauer	CWRU, Graduate Nursing student
March 2011 – May 2011	Yerusalem Abebe	Ohio College of Podiatric Medicine, Medical student
Oct 2011 –April 2012	Alex Davis III	CWRU, Medical Student
Nov 2011-June 2013	Elizabeth Ruedrich	CWRU Undergraduate, Biology/Pre-med
April 2012- May 2013	Jarred Napier	CWRU, Undergraduate, BME/Pre-med
August 2012- Feb 2013	Christopher Chung	CWRU, Graduate/Pre-med student
November 2012-	Tyler Freeto	CWRU, Undergraduate, BME
August 2013-	Berit Eppard	CWRU, Undergraduate, BME
September 2013-	Jonathan Yuan	CWRU, Undergraduate Mech Eng

### **Mentorship**

April 2005 – June 2006	Sepideh Haghpahan, MD	CWRU/MHMC Phys Med & Rehabil resident
June 2005 -June 2006	Patricia Banks, RN, BSN	University of Phoenix, Nursing Practicum
May 2006	Nicole Buckle	Cleveland Heights HS, Senior Project
Nov 2006- Feb 2007	Melanie Boulet, MD	CWRU/MHMC Phys Med & Rehabil SCI fellow
July 2009 – June 2010	Jonathan Macknin, MD	Allen Fellow, CWRU Dept of Orthopaedics
April 2010-	Toula Bensitel, MD	Cleveland Clinic, Fellow
May2010 – June 2011	Jennifer Kim, MD	NEOUCOM, Resident
July 2010 – June 2012	Kristi Henzel, MD, PhD	VA SCI Research Fellow
January 2011 – April 2011	Bianca Goodman	MPH, CWRU Dept. of Epidemiology & Biostatistics

### **RESEARCH SUPPORT**

#### **As Principal Investigator**

2001-2004	VA Rehabilitation and Research Development Service Merit Review Grant #: B2371R (Co-Principal Investigator with RJ Triolo) Percent effort: 60% Pressure Sore Prevention Using Neuromuscular Electrical Stimulation
2004-2007	VA Rehabilitation and Research Development Service Merit Review Grant #: B3259R Percent effort: 60% BIONs® for Improved Tissue Health and Pressure Sore Prevention
2004-2005	2004 Presidential Research Initiative Grant (Co-Principal Investigator with PH Peckham, B Johnstone, J Jasper)  Electrical stimulation for wound healing: development of a lapine ischemic wound model.
2006	Christopher Reeve Foundation (Co-Principal Investigator with CH Ho) Percent effort: N/A Conference support for 1 <sup>st</sup> International Conference on Evidence based Practice in Wound Care
2006	VA Rehabilitation and Research Development Service (Co-Principal Investigator with CH Ho) Percent effort: N/A Conference support for Evidence based Practice in Wound Care
2006-2007	VA VISN10 Research Initiative Program Percent effort: 10% (uncompensated) Advances in pressure relief technology using dynamic materials

2007-2010	VA Rehabilitation and Research Development Service Merit Review Award Percent effort: 55% Implanted gluteal stimulation system for pressure sore prevention
2009-2010	VA VISN10 Research Initiative Program Percent effort: 5% (uncompensated) Evaluation of 3-D digital imaging for reliable wound healing measurement
2009-2010	VA Health Services Research and Development Quality Enhancement Research Initiative Percent effort: 5% (uncompensated) Expert panel for development of PU implementation research agenda
2009-2010	Christopher & Dana Reeve Foundation Quality of Life Initiative Percent effort: N/A Conference support for 2 <sup>nd</sup> International Conference on Evidence based Practice in Wound Care
2009-2010	The Craig Neilsen Foundation Percent effort: N/A Conference support for 2 <sup>nd</sup> International Conference on Evidence based Practice in Wound Care
2009-2010	Dept of Orthopaedics Fellowship Research support Percent effort: 5% (uncompensated) Development of a large animal model for infected acute wounds
2010-2013	VA Rehabilitation and Research Development Service Merit Review Grant #: F7129R Percent effort: 40% Determination of physiological mechanisms for electrical wound therapy
2012-2013	Infectious Diseases Research Support, Steris Corp/University Hospitals Percent effort: 5% A new approach to bug zapping: electrotherapy for acute infected wounds
2012-2013	A VISN10 Research Initiative Program Percent effort: 5% (uncompensated) Heel ulcer prevention: Development of a multi-sensor tissue test device
2013-2015	VA Rehabilitation and Research Development Service Merit Award Percent effort: 20% Development of a low-cost advanced modular pressure relief cushion

**As Co-Investigator**

1997-2000	Spinal Cord Research Foundation/Paralyzed Veterans of America Grant #:1695 (Triolo RJ, Principal Investigator) Percent effort: 60% Improving Tissue Viability of Paralyzed Muscle Using Neuromuscular Electrical Stimulation
2000-2001	Spinal Cord Research Foundation/Paralyzed Veterans of America Grant #: 2074-01 (Triolo RJ, Principal Investigator)

Percent effort: 60%  
Improving Tissue Viability of Paralyzed Muscle Using Neuromuscular Electrical Stimulation

- 2002-2005 VA Rehabilitation and Research Development Service Merit Review Grant #: A2803R  
(Ho, CH, Principal Investigator)  
Percent effort 20%  
Enhancement of pressure ulcer healing with pulsatile lavage
- 2003-2004 Department of Veterans Affairs VISN 10 Emerging Technologies program Grant #: ET39  
(Ho, CH, Principal Investigator)  
Percent effort: 10%  
Virtual Wheelchair Clinic for VISN 10
- 2003-2004 Department of Veterans Affairs VISN 10 Emerging Technologies program Grant #: ET38  
(Ho, CH, Principal Investigator)  
Percent effort: 5%  
Enhancing Skin Care At Home with Technology
- 2003-2004 Department of Veterans Affairs VISN 10 Emerging Technologies program Grant #: ET98  
(Ho, CH, Principal Investigator)  
Percent effort: 5%  
The use of surface electrical stimulation at home for the prevention of pressure ulcers
- 2005-2010 VA Rehabilitation and Research Development Service Center of Excellence  
(Triolo RJ, Principal Investigator)  
Percent effort: 2% (Investigator)  
Advanced Platform Technology Center of Excellence
- 2007-2012 National Institute on Disability and Rehabilitation Research Grant #: H133E070024  
(Brienza DM, Principal Investigator)  
Percent effort: 20%% (Task Leader)  
Effects of weight shifting on pressure ulcer risk status.
- 2010-2012 VA Rehabilitation and Research Development Service Merit Review Grant #: B6406R  
(Triolo RJ, Principal Investigator)  
Percent effort: 10% (Collaborator)  
A neuroprosthesis for seated posture and balance
- 2010-2015 VA Rehabilitation and Research Development Service Center of Excellence  
(Triolo RJ, Principal Investigator)  
Percent effort: 2% (Investigator)  
Advanced Platform Technology Center of Excellence
- 2010 – 2015 Ohio Third Frontier Wright Projects  
(Damaser M, Principal Investigator)  
Percent effort: 2% (Collaborator)  
Clinically Applied Rehabilitation Engineering (CARE)
- 2010 – 2015 Ohio Third Frontier Wright Center for Sensor Systems Engineering Phase 2 Program  
Principal Investigator at CWRU & VA sites  
(PI: Brian Davis PhD, Austen BioInnovation Institute in Akron)  
Percent effort: 2% (CWRU/VA PI)  
Diagnostic Engineering Technologies for Evaluating Connective Tissues (DETECT)



- 2011 NIH Shared Instrumentation: Confocal Microscopy and Advanced Imaging  
Co-Investigator  
(PI: Patricia Conrad PhD, Case Western Reserve University)  
Percent effort: 2% (Collaborator)  
Acquisition of a Leica SCN400 Slide Scanning System for Use in a Multi-User Facility
- 2011 – 2012 NIH R21: National Center for Research Resources Grant #: R21RR032402  
Co-Investigator  
(PI: Qi Wang PhD, Georgia Tech Research Corp/Georgia Tech Applied Research Corp)  
Percent effort: 10%  
Device to mechanically interrogate tissue and skin across research environments

## **BIBLIOGRAPHY**

### **Invited Lectures - National/International**

May 1988, National Meeting on Congenital Neuromuscular Disease, Oxford, UK

*Back shape monitoring using ISIS*

September 1988, International Conference on Wheelchairs and Special Seating, Dundee, Scotland

*Assessment and measurement of deformity*

May 1990, 7<sup>th</sup> National Paramedical Meeting, Stoke Mandeville, UK

*Assessment of tissue viability in the SCI subject*

August 2003, American Society of Neurorehabilitation, Cleveland, Ohio

*Preventing and treating pressure sores in people with spinal cord injury*

October 2004, Academy Of Physical Medicine and Rehabilitation Annual Assembly, Phoenix, Arizona

*What's hot in SCI research - New approaches to the prevention and treatment of pressure ulcers*

September 2006, Evidence-based Practice in Wound Care, Cleveland, Ohio

*Wound care: Novel programs for clinical care and early intervention*

November 2009: Hong Kong Association of Rehabilitation Medicine Annual Scientific Meeting, Hong Kong.

*Advanced practical assessment in pressure ulcer management (Workshop presentation)*

November 2009: Hong Kong Association of Rehabilitation Medicine Annual Scientific Meeting, Hong Kong

*Pressure ulcer management: Before and after tissue breakdown*

November 2009: Symposium on Advanced Care on Pressure Ulcers, Tuen Mun Hospital, Hong Kong

*Assessing pressure ulcer risk: Mapping and measurement*

May 2011: Synergy Seminar, Austen BioInnovation Institute in Akron, Akron, Ohio

*Challenges posed by chronic wounds*

August 2011: 14th Annual Meeting European Pressure Ulcer Advisory Panel, Oporto, Portugal

*The role of neuromuscular electrical stimulation in pressure ulcer prevention*

### **Podium/Poster Presentations - from submitted abstracts**

April 1987, Annual Scientific Meeting, International Society of Prosthetists and Orthotists, York, UK

*Back shape assessment in Duchenne Muscular Dystrophy.*

- September 1988, 28<sup>th</sup> Annual Scientific Meeting, Biological Engineering Society, Salford, UK  
*Biomechanical considerations in seating design.*
- February 1990, 6th International Seating Symposium, Vancouver, BC  
*Assessing the spinal cord injured subject at risk from pressure sores.*
- September 1990, 30<sup>th</sup> Annual Scientific Meeting, Biological Engineering Society, Durham, UK  
*Monitoring tissue viability in the rehabilitating spinal cord injured subject.*
- May 1991, Annual Scientific Meeting, International Medical Society of Paraplegia, Stoke Mandeville, UK  
*Monitoring tissue gas levels in the spinal cord injured subject*
- September 1991, 1st European Conference on Advances in Wound Management, Cardiff, Wales  
*Peri-operative transcutaneous blood gas assessment of SCI patients with pressure ulcers*
- September 1992, Annual Scientific Meeting, International Medical Society of Paraplegia, Barcelona, Spain  
*The need for specialised seating services for the spinal cord injured subject.*
- October 1993, 3<sup>rd</sup> European Conference on Advances in Wound Management, Harrogate UK  
(Presented by M Coggrave, RN)  
*The role of a seating clinic in pressure sore prevention for SCI subjects*
- June 1998, Rehabilitation Engineering and Assistive Technology Society of North America 21<sup>st</sup> Annual Conference, Minneapolis, Minnesota  
*Therapeutic application of neuromuscular electrical stimulation to improve tissue viability in persons with spinal cord injury*
- August 1998, VI EMED Scientific Meeting, Brisbane, Australia  
*Assessing the effect of neuromuscular electrical stimulation on pressure distribution at the seating interface*
- October 1998, 1<sup>st</sup> National Meeting Rehabilitation Research and Development Service, Veterans Administration, Washington, DC  
*Improving the tissue viability of paralyzed muscle using neuromuscular electrical stimulation*
- October 1998, American Spinal Injuries Association 24<sup>th</sup> Annual Scientific Meeting, Cleveland, Ohio  
*Improvement of the tissue viability of paralyzed muscles using neuromuscular electrical stimulation.*
- March 1999, 15<sup>th</sup> International Seating Symposium, Orlando, FL  
*Therapeutic application of NMES to improve pressure distributions at the seating interface*
- January 2000, Orthopaedics Research Days, CWRU, Cleveland, Ohio  
*Maintenance of tissue health through long-term use of neuromuscular electrical stimulation*
- February 2000, 2<sup>nd</sup> National Meeting Rehabilitation Research and Development Service, Veterans Administration, Washington, DC  
*Maintenance of tissue health through long-term use of neuromuscular electrical stimulation*
- June 2001, 6<sup>th</sup> Annual Conference of the International FES Society, Cleveland OH  
*Improving the health of paralyzed tissue using electrical stimulation*
- June 2001, Orthopaedics Research Days, CWRU, Cleveland, Ohio

*Improving the health of paralyzed tissue using electrical stimulation*

February 2002, 3<sup>rd</sup> National Meeting Rehabilitation Research and Development Service, Veterans Administration, Washington, DC

*Improving the health of paralyzed tissue using electrical stimulation*

May 2002, American Spinal Injuries Association/ International Medical Society of Paraplegia, 1<sup>st</sup> Joint Meeting, Vancouver, BC,

*Dynamic pressure relief using therapeutic neuromuscular electrical stimulation*

June 2002, Rehabilitation Engineering and Assistive Technology Society of North America 25<sup>th</sup> Annual Conference, Minneapolis, Minnesota

*Dynamic pressure relief for the wheelchair user with long-term therapeutic neuromuscular electrical stimulation*

April 2003, American Spinal Injuries Association 29<sup>th</sup> Annual Scientific Meeting, Miami, FL

*Use of neuromuscular electrical stimulation for sustained tissue health*

August 2003, SPUR program, CWRU, Cleveland, Ohio (Presented by G Siesel)

*Electrical stimulation of human dermal fibroblasts*

October 2003, 18th Annual Clinical Symposium on Advances in Skin and Wound Care, Chicago, IL  
(Presented by PG Banks, RN)

*A pilot study to determine the efficacy of pulsatile lavage therapy for enhanced healing of non-necrotic pressure ulcers*

February 2004, 40th Annual AAP Educational Conference, Albuquerque, NM

*Dynamic therapeutic neuromuscular electrical stimulation for pressure relief*

February 2004, 40th Annual AAP Educational Conference, Albuquerque, NM

(Presented by R Dennis, MD)

*Pulsatile lavage as an alternative hydrotherapy treatment for pressure ulcers in spinal cord injury*

July 2004, Annual Meeting of the International Federation of Classification Societies, Chicago, IL

(Presented by J Sun, PhD)

*Mining huge-p-small-n data and new image registration procedures.*

October 2004, Dept of Statistics Seminar Series, Carnegie Mellon University, Pittsburgh, PA

(Presented by J Sun, PhD)

*Mining huge-p-small-n data and new image registration procedures.*

April 2005, Research showCASE 2005, Case Western Reserve University, Cleveland, OH

(Presented by PG Banks, RN)

*Fluid Volume Measurements: The Gold Standard?*

April 2005, Research showCASE 2005, Case Western Reserve University, Cleveland, OH

(Presented by X Wang, MS)

*Mining huge-p-small-n data and new image registration procedures.*

May 2005, 15th Annual Meeting and Exposition of the Wound Healing Society, Chicago, IL

(Presented by PG Banks, RN)

*Fluid Volume Measurements: The Gold Standard?*

August 2005, Joint XXth Congress of the International Society of Biomechanics and 29th Annual Meeting

of the American Society of Biomechanics, Cleveland, OH  
(Presented by X Wang, MS)  
*A new analytical tool to increase information retrieval from complex images*

October 2005, Academy Of Physical Medicine and Rehabilitation Annual Assembly, Philadelphia, PA  
(Selected for presentation at Clinical Outcomes Poster Grand Rounds)  
*Is Volume a True Gold Standard for Wound Size Measurement?*

October 2005, Academy Of Physical Medicine and Rehabilitation Annual Assembly, Philadelphia, PA  
(Presented by CH Ho, MD)  
*Pulsatile lavage as an adjunct hydrotherapy treatment for pressure ulcers: a randomized controlled trial.*

April 2006, Research showCASE 2006, Case Western Reserve University, Cleveland, OH  
(Presented by D Howe, BS)  
*Integrated surface electrical stimulation device for therapeutic applications.*

August 2006, Advanced Technology Applications for Combat Casualty Care 2006, St Petersburg, Florida  
*Integrated surface electrical stimulation device for wound therapy applications*

August 2007, North American Spinal Cord Injury Conference & Disability Expo 2007, Orlando, Florida  
*Effects of trunk neuromuscular electrical stimulation on seated posture stability and function*

November, 2007, National Academies Keck Futures Initiative The Future of Human Healthspan, Newport Beach, CA.  
*Chronic wounds: prevention and treatment*

April 2008, Research showCASE 2008, Case Western Reserve University, Cleveland, OH  
(Presented by GA Whitney, MS)  
*In-vitro determination of clinically relevant electrical stimulation parameters for fibroblast proliferation*

April 2008, Research showCASE 2008, Case Western Reserve University, Cleveland, OH  
(Presented by GA Wu, MS)  
*Reliability analysis of gluteus maximus muscle cross-sectional area measurements*

June 2008. Rehabilitation Engineering and Assistive Technology Society of North America 31<sup>st</sup> Annual Conference, Washington, DC  
(Presented by GA Wu, MS)  
*Reliability Analysis of Gluteus Maximus Muscle Cross-Sectional Area Measurements Using Two Different Image Analysis Programs*

September 2008, MetroHealth Research Day, MetroHealth Medical Center, Cleveland, OH  
(Presented by GA Wu, MS)  
*Evaluation of an active pressure relief cushion to prevent pressure ulcers*

April 2009, Research showCASE 2009, Case Western Reserve University, Cleveland, OH  
(Presented by GA Wu, MS)  
*Validating the location of the branching of inferior gluteal nerve*

September 2009, MetroHealth Research Day, MetroHealth Medical Center, Cleveland, OH  
(Presented by GA Wu, MS)  
*Pressure ulcer risk after use of an active pressure cushion*

March 2010, Musculoskeletal Research Day, Case Western Reserve University, Cleveland, OH  
(Presented by J Macknin, MD) Winner: Best post-doc poster award  
*Development of a large animal model for infected acute wounds*

April 2010, Research showCASE 2010, Case Western Reserve University, Cleveland, OH  
(Presented by GA Wu, MS)  
*Determining the effects of a dynamic cushion for at-risk users using a multi-factorial tissue health assessment protocol*

April 2010, Research showCASE 2010, Case Western Reserve University, Cleveland, OH  
(Presented by J Macknin, MD)  
*Development of a large animal model for infected acute wounds*

April 2010, VA Research Week, Louis Stokes Cleveland VAMC, Cleveland, OH  
*3-D Digital Imaging for Reliable Wound Measurement*

July 2010, European Society of Biomechanics, Edinburgh, Scotland  
*Multi-factorial tissue health assessment protocol: Determining the effects of a dynamic cushion for at-risk users*

October 2010, MetroHealth Research Day, MetroHealth Medical Center, Cleveland, OH  
(Presented by GA Wu, MS)  
*Multi-factorial approach to determine effects of weight shifting with a dynamic cushion on tissue health of at-risk users*

May 2011, VA Research Week, Louis Stokes Cleveland VAMC, Cleveland, OH  
*Developing a method for effective use of electrotherapy for wound healing*

June 2011, ISCoS/ASIA 2011, Washington, D.C  
(Presented by GA Wu, MS)  
*Multifactorial tissue health assessment of at-risk users and effects of weight shifting with a dynamic cushion*

July 2011, International Society of Biomechanics, Brussels, Belgium  
(Presented by GA Wu, MS)  
*Effects of using a dynamic cushion for the tissue health of persons at-risk*

August 2011, 33rd Annual International IEEE Engineering in Medicine and Biology Society Conference, Boston, MA  
(Presented by DS Howe, MS)  
*A wearable stimulation device for electrotherapy studies in rat ischemic wounds*

September 2011, Annual Meeting of the Academy of Spinal Cord Injury Professionals, Las Vegas, NV  
(Presented by BG Goodman, MPH)  
*Factors associated with recurrent hospitalizations for pressure ulcer management*

September 2011, MetroHealth Research Day, MetroHealth Medical Center, Cleveland, OH  
(Presented by GA Wu, MS)  
*Tissue health effects of a dynamic cushion for pressure redistribution in persons with SCI: oxygenation and component analysis of blood flow*

April 2012, 22<sup>nd</sup> Annual Meeting of the Wound Healing Society SAWC-Spring/WHS Joint Meeting, Atlanta, GA  
*Optimization of a rat ischemic wound model for evaluation of the effects of electrotherapy on*

wound healing.

- April 2012, American Spinal Injuries Association 38th Annual Scientific Meeting, Denver, CO  
(Presented by GA Wu, MS)  
*Effects of trunk neuromuscular electrical stimulation on posture and tissue health of individuals with spinal cord injury*
- June 2012, Rehabilitation Engineering and Assistive Technology Society of North America 35<sup>th</sup> Annual Conference, Baltimore, MD  
(Presented by GA Wu, MS)  
*Comparison of the effects of conventional weight-shifting and dynamic wheelchair cushions using a multi-factorial tissue health assessment protocol*
- April 2013, Research showCASE 2010, Case Western Reserve University, Cleveland, OH  
(Presented by DS Howe, PhD)  
*A Wearable Stimulation Bandage for Electrotherapy Studies in a Rat Ischemic Wound Model*

### **Published Manuscripts**

- Bogie KM**, Bader DL. *The biomechanics of seating - an initial study*. Biomechanics XI-A Eds.: de Groot G., Hollander A.P., Huijing P.A., van Ingern Schenau G.J. Free University Press, Amsterdam 285-289, 1988
- Bogie KM**, Bader DL. *Monitoring back shape in Duchenne Muscular Dystrophy*. Biomechanics XI-A Eds.: de Groot G, Hollander AP., Huijing PA, van Ingern Schenau GJ. Free University Press, Amsterdam 498-503, 1988
- Bogie KM**, Nuseibeh I, Bader DL. *Transcutaneous gas tensions in the sacrum during the acute phase of spinal cord injury*. Proc. Instn. Mech. Engrs, 206:1-6, 1992
- Bogie KM**, Nuseibeh I, Bader DL. *Early progressive changes in the seated spinal cord injured subject*. Paraplegia, 33:141-147, 1995
- Bogie KM**, Triolo RJ. *The effects of regular use of neuromuscular electrical stimulation on tissue health*. Journal of Rehabilitation Research and Development 40(6): 469-475, 2003
- Bogie KM**, Ho CH, Terris DD. *Clinical evidence for new pressure ulcer treatment modalities*. Long-Term Care Interface, 43-47, June 2005
- Skalak AF, **Bogie K**. *Relationship of inferior gluteal nerves and vessels: Target for application of stimulation devices for the prevention of pressure ulcers in spinal cord injury*. Orthopaedic Journal, Case Western Reserve University 2(1); 59-61, 2005
- Bogie KM**, Wang X, Triolo RJ. *Long term prevention of pressure ulcers in high risk individuals: a case study of the use of gluteal neuromuscular electrical stimulation*. Arch Phys Med Rehabil, 87(4):585-91, 2006 PMID: 16571402
- Haghpanah S, **Bogie KM**, Banks PG, Wang X, Ho CH. *Reliability of electronic vs. manual wound measurement methods*. Arch Phys Med Rehabil 87(10): 1396-402, 2006 PMID: 17023252
- Wang X, Sun J, **Bogie KM**. *Spatial-temporal data mining: LASR .IMS Lecture Notes – Monograph Series 50, Recent Developments in Nonparametric Inference and Probability: Festschrift for Michael Woodroffe*, (50): 213-31, 2006

**Bogie K**, Ho CH. *Multidisciplinary approaches to the pressure ulcer problem*. Ostomy Wound Management. 53(10): 26-32, 2007 PMID: 17978412

Ho CH, **Bogie K**. *Integrating Wound Care Research into Clinical Practice* Ostomy Wound Management. 53(10): 18-25, 2007 PMID: 17978411

Ho CH, **Bogie K**. *The prevention and treatment of pressure ulcers*. Physical Medicine and Rehabilitation Clinics of North America: Focus Issue on Spinal Cord Injury. 18(2): 235–253, 2007

Whitney GA, **Bogie K**. *Preliminary evaluation of fibroblast proliferation as an in-vitro model for assessment of wound treatment*. Orthopaedic Journal, Case Western Reserve University 4(1); 64-67, 2007

Skalak AF, McGee MF, Wu G, **Bogie K**. *Relationship of inferior gluteal nerves and vessels: target for application of stimulation devices for the prevention of pressure ulcers in spinal cord injury*. Surg Radiol Anat. 30(1):41-5, 2008. Epub 2007 Nov 30. PMID: 18049789

**Bogie K**, Wang X, Fei B, Sun J. *New technique for real-time interface pressure analysis: Getting more out of large image data sets*. J Rehabil Res Dev. 2008;45(4):523-36. PMID: 18712638

Morris KA, McGee MF, Jasper JJ, **Bogie KM**. *Evaluation of electrical stimulation for ischemic wound therapy: a feasibility study using the lapine wound model*. Arch Dermatol Res 2009 301(4):323–327 PMID: 19050907

Wu GA, **Bogie K**. *Assessment of gluteus maximus muscle cross-sectional area with different image analysis programs*. Arch Phys Med Rehabil. 2009 90(6):1048-54 PMID: 19480883

Kim J, Ho CH, Wang X, **Bogie K**. *The use of sensory electrical stimulation for pressure ulcer prevention*. Physiotherapy Theory and Practice. 2010 Nov;26(8):528-36. Epub 2010 Jul 22. PMID: 20649492

Macknin J, Cover M, **Bogie K**. *Development of a porcine model for acute infected wounds*. Orthopaedic Journal, Case Western Reserve University 7(1); 62-66, 2010

Henzel MK, **Bogie KM**, Guihan M, Ho CH. *Pressure ulcer management and research priorities for patients with spinal cord injury: Consensus opinion from SCI QUERI Expert Panel on Pressure Ulcer Research Implementation*. J Rehabil Res Dev. 2011; 48(3):xi–xxxii. DOI:10.1682/JRRD.2011.01.0011 PMID: 21480093

Ho CH, Bensitel T, Wang X, **Bogie KM**. *Pulsatile lavage for the enhancement of pressure ulcer healing - a randomized, controlled trial*. Phys Ther. 2012 Jan;92(1):38-48. Epub 2011 Sep 23. PMID: 21949432

Kim JH, Wang X, Ho CH, **Bogie KM**. *Physiological measurements of tissue health; implications for clinical practice*. International Wound Journal 2012 Jan 30. doi: 10.1111/j.1742-481X.2011.00935.x. [Epub ahead of print] PMID: 22289151

**Bogie K**, Powell HL, Ho CH. *New concepts in the prevention of pressure sores*. Handb Clin Neurol. 2012; 109: 235-46. doi: 10.1016/B978-0-444-52137-8.00014-0. PMID: 23098716

**Bogie KM**, Ho CH. *Pulsatile lavage for pressure ulcer management in spinal cord injury: a retrospective clinical safety review*. Ostomy Wound Manage. 2013 Mar; 59(3):35-8. PMID: 23475450

Davis AJ, Nishimura J, Seton J, Goodman BL, Ho CH, **Bogie KM**. *Repeatability and clinical utility in stereophotogrammetric measurements of chronic wounds*. J Wound Care 2013; 22(2): 85 - 89  
Awarded FIRST HIGHLY COMMENDED for Urgo Medical Wound Assessment paper award (03/18/13)

Wu GA, **Bogie KM**. *Not just quantity: gluteus maximus muscle characteristics in able-bodied and SCI individuals - implications for tissue viability*. J Tissue Viability. 2013 Aug;22(3):74-82. doi: 10.1016/j.jtv.2013.03.003. Epub 2013 Apr 21. PMID: 23615320

Wu GA, Lombardo L, Triolo RJ, **Bogie KM**. *The effects of combined trunk and gluteal neuromuscular electrical stimulation on posture and tissue health in spinal cord injury*. PM R. 2013 Mar 28. doi:pii: S1934-1482(13)00154-8. 10.1016/j.pmrj.2013.03.025. [Epub ahead of print] PMID: 23542776

Masturzo A, Beltz WR, Cook R, Bates-Jensen B, Stechmiller J, Korzendorfer H, **Bogie K**, Fulton JA, Himel H, Gould LJ. *Wound care certification: The grin without a cat*. Wound Repair Regen. 2013 Jul;21(4):494-7. doi: 10.1111/wrr.12067. Epub 2013 Jun 11. PMID: 23758263.

Ruedrich ED, Henzel MK, Hausman BS, **Bogie KM**. *Reference gene identification for reverse transcription-quantitative polymerase chain reaction analysis in an ischemic wound healing model*. J Biomolecular Techniques. In press August 2013

### Chapters

**Bogie KM**, Nuseibeh I, Bader DL. *New concepts in the prevention of pressure sores*. Handbook Clin. Neurol. Spinal Cord Trauma 2<sup>nd</sup> edition, Ed.: Frankel HL. Elsevier, 17(16): 347-366, 1992

**Bogie KM**, Bader DL. *Susceptibility of spinal cord injured individuals to pressure ulcers*. Pressure Ulcer Research, Eds: Bader D, Bouten C, Colin D, Oomens C. Springer-Verlag, 73-88, 2005

Ho CH, **Bogie K**. *Pressure Ulcers*. Essentials of Physical Medicine and Rehabilitation. Eds: Frontera WR, Silver JK, Rizzo Jr TD. Elsevier, Philadelphia 813-821, 2008

Ho CH, **Bogie K**. *Pressure Ulcers*. Delisa's Physical Medicine and Rehabilitation: Principles and Practice. Eds: Frontera WR, DeLisa JA, Gans BM, Walsh NE, Robinson LR. Lippencott, Philadelphia, 52: 1393-1409, 2010

**Bogie K**, Ho C, Washington M, Foster-Geeter S, Seton J, Mitchell S, Kilbane M, Kubec G, Sexton K, Dixon T, White JL. *Interdisciplinary essentials in pressure ulcer management: Essentials of Spinal Cord Injury*. Eds: Fehlings, Vaccaro, Boakye, Rossignol, Ditunno, and Burns , Thieme, New York, NY 2012

**Bogie KM**, Powell HL, Ho CH. *New concepts in the prevention of pressure sores*. Handbook Clin. Neurol. Spinal Cord Injury 3<sup>rd</sup> edition, Eds.: Verhaagen J, McDonald JW. Elsevier, 109(14): 235-246, 2012

### Invited Reviews

Triolo RJ, **Bogie KM**. *Lower extremity applications of functional neuromuscular stimulation after spinal cord injury*. Topics in SCI Rehab. 5(1): 44-65, 1999

**Bogie KM**, Reger SI, Levine SP. *Therapeutic applications of electrical stimulation; Wound healing and pressure sore prevention*. Assistive Technology 12(1): 50-66, 2000

Creasey GH, Ho CH, Triolo RJ, Gater DR, DiMarco AF, **Bogie KM**, Keith MW. *Clinical applications of electrical stimulation after spinal cord injury*. J Spinal Cord Med. 27(4):365-75, 2004 PMID: 15484667

### Other Invited Publications

Sun J, Wang X, **Bogie KM**. *Overcoming Challenges in Mining Large Sequences of Image Data to Reduce the Chance of Developing Pressure Ulcers (collaborative research in Statistics and Orthopaedics)*. The Value of Research, Case Western Reserve University, 2006-7 Edition, 31



**Bogie K**, Ho CH. *Guest Editorial: Bringing Evidence-based Wound Research to the Bedside*. Ostomy Wound Management 53(10):6, 2007

**Bogie KM**. *Evidence-based practice in wound care: Toward addressing our knowledge gaps*. J Rehabil Res Dev. 2011;48(3):vii–x. DOI:10.1682/JRRD.2011.01.0010

#### **Published Abstracts**

**Bogie KM**, Nuseibeh I, Bader DL. *Peri-operative transcutaneous blood gas assessment of SCI patients with pressure ulcers*. Proc. 1st European Conference on Advances in Wound Management, Eds.: Harding KG, Leaper DL, Turner TD. Macmillan, London, 129-130, 1991

**Bogie KM**, Triolo RJ, Chae J. *Improvement of the tissue viability of paralyzed muscles using neuromuscular electrical stimulation*. Ann. Biomed. Eng. 26, Suppl. 1, S130, October 1998

**Bogie KM**, Triolo RJ, Chae J, Peckham PH, Frost F. *Improving the tissue viability of paralyzed muscles using neuromuscular electrical stimulation*. J. Spinal Cord Med., 21(2): 179, 1998

**Bogie K**, Ho CH, J Chae, Triolo RJ. *Dynamic therapeutic neuromuscular electrical stimulation for pressure relief*. Am J Phys Med Rehabil, 83(3), 240, 2004

Dennis R, Ho CH, **Bogie K**, Blake R. *Pulsatile lavage as an alternative hydrotherapy treatment for pressure ulcers in spinal cord injury*. Am J Phys Med Rehabil, 83(3), 246, 2004

**Bogie KM**, Wang X, Sun J. *LASR: A new analytical tool to increase information retrieval from complex images*. Proc. Joint XXth Congress of the International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, July 31-Aug 5, 2005

**Bogie KM**, Banks P, Washington M, Stubblefield AM, Ho CH. *Is Volume a True Gold Standard for Wound Size Measurement?* Arch. Phys. Med. Rehabil., 86(9), e16, 2005

Ho CH, **Bogie KM**, Banks PG, Sakai J, Washington M, Stubblefield AM, *Pulsatile lavage as an adjunct hydrotherapy treatment for pressure ulcers: a randomized controlled trial*. Arch. Phys. Med. Rehabil., 86(9), e38, 2005

Wang X, Sun J, **Bogie K**. *Mining huge-p-small-n data and new image registration procedures*, 2005 Proceedings of the American Statistical Association, Biometrics Section, Alexandria, VA: American Statistical Association: *To be published*

**Bogie K**, Nemunaitis G, Boggs L, Smith J, Wu G, Triolo R. *Effects of trunk neuromuscular electrical stimulation on seated posture stability and function*. J. Spinal Cord Med., 30(4): 407, 2007

Nishimura J, Davis A, Seton JC, Goodman BL, Ho CH, **Bogie KM** *Evaluation of 3D digital imaging for reliable wound healing measurement*. 21st Annual Meeting of the Wound Healing Society SAWC-Spring/WHS Joint Meeting. Wound Rep Regen, 19: A40, 2011  
doi: 10.1111/j.1524-475X.2010.00670.x

Wu G Mejia M.; Nemunaitis G; **Bogie K**. *Multifactorial tissue health assessment of at-risk users and effects of weight shifting with a dynamic cushion*. 2011 International Congress on Spinal Cord Medicine and Rehabilitation, ISCoS/ASIA 2011, Topics in Spinal Cord Injury Rehabilitation 16(16): 29, 2011  
doi: 10.1310/sci16S1-1

Howe DS, Dunning JL, Henzel MK, Graebert JK, **Bogie KM**. *A wearable stimulation bandage for electrotherapy studies in a rat ischemic wound model*. Conf Proc IEEE Eng Med Biol Soc.

2011;2011:298-301. PMID: 22254308

Henzel MK, Howe DS, Graebert J, **Bogie KM**. *Optimization of a rat ischemic wound model for evaluation of the effects of electrotherapy on wound healing*. 22<sup>nd</sup> Annual Meeting of the Wound Healing Society SAWC-Spring/WHS Joint Meeting. Wound Rep Regen 20 A24, 2012

### **Internal presentations (research seminars)**

April 2001, 1<sup>st</sup> Annual VA Research Day, Cleveland VA Medical Center, Cleveland, Ohio  
*Neuromuscular electrical stimulation for improvement and maintenance of tissue health.*

June 2001, Applied Neural Control Research Day Showcase, Cleveland, Ohio  
*Measuring interface pressure distribution and modulating seated posture with electrical stimulation.*

September 2002, Applied Neural Control Research Day, CWRU, Cleveland, Ohio)  
*Fourier analysis of seating interface pressure data*  
(Presented by K Morris)

April 2003, 3<sup>rd</sup> Annual VA Research Day, Cleveland VA Medical Center, Cleveland, Ohio  
*Enhancement of pressure ulcer healing with pulsatile lavage*

August 2004, Dept of Orthopaedics Grand Rounds, Cleveland, Ohio  
*Electrical stimulation and the management of pressure ulcers*

August 2004, Applied Neural Engineering Research Day, CWRU, Cleveland, Ohio  
*The effects of electrical stimulation on the growth of human fibroblasts*  
(Presented by A Vikmanis)

September 2004, Rehabilitation Engineering Center Seminar, Cleveland, Ohio  
*Electrical stimulation and the management of pressure ulcers*

December 2004, Case/CCF Musculoskeletal Research Seminar, Cleveland, Ohio  
*Electrical stimulation and wound healing*

December 2006, Orthopaedic and Related Research Seminar, Case Western, Cleveland, Ohio  
*Electrical microstimulation for wound healing*  
(Presented by Adam Whitney)

October 2009, Allen Research Fellowship Program seminar, Case Western, Cleveland, Ohio  
*Development of a large animal model for infected acute wounds: background and study design*  
(Presented by Jonathan Macknin, MD)

February 2010, Orthopaedic and Related Research Seminar, Case Western, Cleveland, Ohio  
*Pressure ulcer management: before and after tissue breakdown*

February 2010, Orthopaedics and Related Research Seminar, Case Western, Cleveland, Ohio  
*Development of a large animal model for infected acute wounds: progress report.*  
(Presented by Jonathan Macknin, MD)

January 2011, Lepow Day, Case Western, Cleveland, Ohio  
*Evaluation of 3D digital imaging for reliable wound healing measurement*  
(Presented by Jennifer Nishimura, DC)

January 2011, Lepow Day, Case Western, Cleveland, Ohio  
*Development of a porcine model for acute infected wounds*  
(Presented by Michael Cover, BS)

January 2011, Lepow Day, Case Western, Cleveland, Ohio  
*Determination of physiological mechanisms for electrical wound therapy*  
(Presented by Yu Kan Au, BS and Gabriel Gabarain, BS)

February 2011, BME Graduate Seminar, Case Western, Cleveland, Ohio  
*Addressing the problem of pressure ulcers: approaches to prevention*

April 2011, Innovations Conference, Case Western, Cleveland, Ohio  
*An analytic study of factors associated with recurrent hospitalizations for pressure ulcer management in spinal cord injury patients*  
(Presented by Bianca L. Goodman, BA, MPH Candidate)

July 2013, Dept of Orthopaedics Grand Rounds, Cleveland, Ohio  
*Wound healing*